

**Notice of Allowability**

Application No.

10/718,890

Examiner

Lee, Calvin

Applicant(s)

CHEN, KUNHONG

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ The drawings filed on \_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date hereto.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other Marked up version of Drawings

**OFFICE ACTION**

***Examiner's Amendment***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312.

IN THE DRAWINGS: Figures 1A-1J have been labeled "PRIOR ART"

***Allowable Subject Matter***

2. Claims 1-20 are allowed. Following is the reason for allowance:

US 2004/0110327 to *Ishikawa* discloses forming a first photoresist pattern having a two-portion structure with a first portion having a first width and a second portion **107** above the first portion **106** with a second width [Fig. 1B]; removing a gate electrode **110** of first and second layers **104**, **105** to have the same width as the second width [Fig. 1D]; and reducing the gate electrode layer **105** to have the same width as the first width using a second photoresist **106** [Fig. 1E and page 5]. US 2004/0089900 to *Ishikawa et al*, discloses forming a first photoresist pattern **8** having a two-portion structure with a first portion having a first width and a second portion underneath the first portion with a second width [Fig. 8C]; removing a doped semiconductor layer **17**, an intrinsic semiconductor layer **16**, and a gate insulating film **15** to have the same width as the second width [Fig. 8D and page 6]; and reducing the first photoresist pattern to form a second photoresist pattern having the first width [Fig. 9A]. US 6,479,398 to *Chen et al* discloses forming a first photoresist pattern **325** having a two-portion structure with a first portion having a first width and a second portion underneath the first portion with a second width [Fig. 4C and col. 4]; removing a gate metal layer **102**, an n<sup>+</sup> amorphous layer **205**, and an intrinsic amorphous layer **103** to have the same width as the second width [Fig. 4D]; reducing the first photoresist pattern to form a second photoresist pattern having the first width [Fig. 4E]; reducing the gate metal layer **102** to have the same width as the first width using a second photoresist [Fig. 4F]; and reducing the underlying n<sup>+</sup> amorphous layer **205** [Fig. 4G and col. 5].

However, none of the cited art discloses, *inter alia*, removing a gate metal layer, a first dielectric layer, and a silicon layer to have the same second width; and doping a predetermined impurity in the silicon layer for forming a source region and a drain region of a predetermined type in areas not directly underneath the reduced gate metal layer.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Contact Information***

4. Any inquiry concerning this communication from the Examiner should be directed to *Calvin Lee* at (571) 272-1896 from 7:00 to 17:00 (Monday-Thursday). If attempts to reach the examiner by telephone are unsuccessful, Art Unit 2825's Supervisory Patent Examiner *Matthew Smith* can be reached at (571) 272-1907.

Any inquiry relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0596. The central fax number is (703) 872-9306 for all communications to be entered (e.g., amendments, remarks, IDS, etc.)

CL

September 10, 2004

MATTHEW SMITH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

*Matthew Smith*

MATTHEW SMITH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800